

REMARKS

With this Response, no claims are amended, added, or canceled. Therefore, claims 1-29 are pending.

DOUBLE PATENTING

Claims 1, 2, 17, 9, 16, 21, 22, 24, 25 and 27 are rejected under 35 U.S.C. § 101 as claiming the same invention as that of claims 1, 3-5, 9-13, 13, 16, 19, 21-24, 26, 30 and 33 of prior US Patent No. 6,922,717 (hereinafter the '717 patent). Applicants respectfully submit that this rejection is improper. Applicants refer to MPEP § 804.II.A, which recites:

A reliable test for double patenting under 35 U.S.C. 101 is **whether a claim in the application could be literally infringed without literally infringing a corresponding claim in the patent.** *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970). Is there an embodiment of the invention that falls within the scope of one claim, but not the other? If there is such an embodiment, then identical subject matter is not defined by both claims and statutory double patenting would not exist. For example, the invention defined by a claim reciting a compound having a "halogen" substituent is not identical to or substantively the same as a claim reciting the same compound except having a "chlorine" substituent in place of the halogen because "halogen" is broader than "chlorine." On the other hand, claims may be differently worded and still define the same invention. Thus, a claim reciting a widget having a length of "36 inches" defines the same invention as a claim reciting the same widget having a length of "3 feet."

Applicants further refer to the Specification at paragraphs [0024] and [0030] to [0032], which describe a modular exponentiator, which includes at least a modular multiplier. Applicants respectfully submit that those skilled in the art would understand that a modular exponentiator includes a multiplier, by definition. Further, as one skilled in the art would understand, and as set forth in Applicants' Specification as referred to above, Applicants' exponentiator is described as including a multiplier, although there is no requirement for Applicants' exponentiator to include a multiplier of the type claimed in the '717 patent. Additionally, Applicants point to the fact that although the logical function of exponentiating has mathematic overlaps with multiplication, as performed by hardware devices, multiplication and exponentiation are not identical. Applicants note that Figure 3 of the above-referenced patent application shows exponentiation controllers, which are part of exponentiators, but which are not part of multipliers. Applicants again submit that a modular exponentiator and a modular multiplier are not equivalent. A modular multiplier as claimed in the '717 patent has broader application than use in a modular exponentiator, as recited in the claimed invention. Furthermore, the modular multiplier of the '717 patent does not

necessarily disclose a modular exponentiator, which requires exponentiation control logic not discussed in the '717 patent.

CLAIM REJECTIONS - 35 U.S.C. § 103

Claims 1-29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 6,240,436 to McGregor (hereinafter "McGregor") in view of US Patent No. 5,189,636 to Patti et al. (hereinafter "Patti"). Applicants respectfully submit that the claimed invention is not rendered obvious by the cited references for at least the following reasons.

McGregor discusses a modular exponentiator (see Figure 2, element 20, and accompanying description at col. 4, lines 23 to 38). The Office Action at page 5, section 3.2 that McGregor discloses: "a plurality of modular exponentiators (28) including a first modular exponentiator and a second modular exponentiator (see Figure 2 with detailed description), and a coupling device (22) interposed between said first modular exponentiator and said second modular exponentiator to receive a control signal...." This language is exactly the same as what is asserted in the First Office Action mailed September 23, 2005 at pages 3 to 4, section 3.2. Applicants note that Figure 2 of McGregor includes two items, 28a and 28b, both of which are labeled "**multiplier**." Applicants further note that the description at col. 4, lines 23 to 38, which describes Figure 2, describes both of these elements as multipliers, not exponentiators as asserted in the Office Action. The Figure and description only shows and describes a **single exponentiator**, which is element 20. The interface logic (22) "controls communication between the modular exponentiator 20 [Applicants note the singular nature of the exponentiator noun] and the data and control bus 18...." Noticeably absent is any discussion of interface logic unit 22 coupling one exponentiator to another. Rather, in contrast to what is asserted in the Office Action, interface logic unit 22 couples a single exponentiator to a bus, instead of to another exponentiator. Also, in contrast to what is asserted in the Office Action, the cited reference discusses two multipliers (28) and fails to disclose multiple exponentiators. Thus, Applicants respectfully submit that the discussion of the rejection in the Office Action is not supported by the cited reference.

In contrast to McGregor, Applicants' independent claims 1, 9, 16, 21, 24, and 27 recite a plurality of modular exponentiators. The cited reference fails to disclose or suggest multiple exponentiators as recited in the claimed invention, and so fails to disclose or suggest at least one feature of the claimed invention.

Furthermore, Applicants note that Patti discusses the combination of multiple adders by a selectable AND gate to combine multiple adders into a single adder. The Office Action asserts based on this discussion that Patti discloses combining multiple exponentiators together. Applicants do not concede that one of ordinary skill in the art would understand the reference to disclose what is asserted in the Office Action. As discussed above, an exponentiator and a multiplier include different features. Thus, whether or not the teachings of Patti could be combined with the teachings of McGregor, which Applicants do not concede, neither McGregor nor Patti discusses multiple exponentiators. Both references suffer the same defect. Whether alone or in combination, the cited references fail to disclose or suggest at least one feature of the claimed invention, and so fail to support an obviousness rejection under MPEP § 2143.

Regarding the dependent claims, Applicants note that claims depending from a nonobvious independent claim are also nonobvious. See MPEP § 2143.03. Thus, the dependent claims are patentable over the cited references for at least the reasons set forth above with respect to the independent claims.

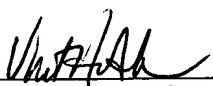
CONCLUSION

For at least the foregoing reasons, Applicants submit that the rejections of the claims have been overcome herein, placing all pending claims in condition for allowance. Such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the above-referenced application.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
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05/30/06

Date